



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/735,913	12/14/2000	Hiroaki Kaneko	040302/0250	5823
22428	7590	07/09/2004	EXAMINER	
FOLEY AND LARDNER SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			MERCADO, JULIAN A	
			ART UNIT	PAPER NUMBER
			1745	

DATE MAILED: 07/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/735,913

Applicant(s)

KANEKO ET AL.5

Examiner

Julian Mercado

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 30 April 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-6,9-17 and 21-30 is/are pending in the application.
- 4a) Of the above claim(s) 1-5, 12-17 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9, 25-30 is/are allowed.
- 6) ☒ Claim(s) 6, 10, 11, 21-23 is/are rejected.
- 7) ☐ Claim(s) 24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

Art Unit: 1745

## **DETAILED ACTION**

### ***Remarks***

This Office action is responsive to applicant's amendment filed April 30, 2004.

Claims 1-6, 9-17 and 21-24 are pending, of which claims 1-5 and 12-17 are withdrawn from consideration.

This Office action presents a new ground of rejection and is therefore made NON-FINAL.

### ***Information Disclosure Statement***

The April 20, 2001 Information Disclosure Statement has been considered by the examiner.

The document DE 253160 cited in the December 11, 2003 Information Disclosure Statement has been considered by the examiner in view of applicant's assertion that the relevance of this document is its citation in a corresponding German application and in view of applicant's discussion thereof on page 8 of the present amendment in lieu of the unavailable English abstract or translation.

### ***Claim Rejections - 35 USC § 112***

The rejection of claims 9 and 21-24 under 35 U.S.C. 112, second paragraph has been withdrawn.

***Claim Rejections - 35 USC § 102 and 103***

Withdrawn rejection(s):

The rejection of claims 6, 10 and 11 under 35 U.S.C. 102(e) based on Wieland et al. (U.S. 6,413,449 B1) has been withdrawn.

The rejection of claims 21-23 under 35 U.S.C. 103(a) based on Wieland et al. and Cheung (U.S. Pat. 4,058,485) has been withdrawn.

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 6, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wieland et al. (U.S. 6,413,449 B1) in view of Masuda (U.S. Pat. 4,501,823).

Wieland et al. has been discussed in the prior Office action. A reiteration here follows. Wieland et al. teaches the formation and use of a methanol reforming catalyst comprising impregnating a metal oxide powder such as zirconium oxide or Zr oxide, *inter alia*, with Pd and Zn, then burning, i.e. calcining the impregnated metal oxide support at a temperature of 300°C to 550°C. (col. 4 line 59-67, col. 6 line 17-23 and line 55-57, applies to independent claim 1 and dependent claim 10) The metal oxide is reduced at 350°C to 500°C. (col. 6 line 22-23, applies to dependent claim 10)

Applicant's present amendment is noted to have deleted the Markush member "Zr oxide powder". Wieland et al. does not explicitly teach a Ce oxide or Ce-Zr oxide powder as the support, however, Masuda teaches Ce oxide or Ce-Zr oxide powder as a catalyst support. (col. 8

Art Unit: 1745

line 15-24) The skilled artisan would find obvious to modify Wieland et al.'s invention by employing a Ce oxide or Ce-Z oxide powder in view of the resulting higher catalytic activity and endurance thereof. (*ib*)

Claims 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wieland et al. in view of Masuda as applied to claims 6, 10 and 11 above, and further in view of Cheung (U.S. Pat. 4,058,485).

The teachings of Wieland et al. and Masuda are discussed above.

Wieland et al. in view of Cheung has been discussed in the prior Office action. A reiteration here follows. Cheung is maintained to teach that monolithic substrates "have been known for many years" as part of fuel cell electrode components. (col. 1 line 9-42) Thus, the skilled artisan would find obvious to employ a monolithic substrate in Wieland et al. for reasons such as employing a substrate with physical strength, high porosity, high surface area and high temperature tolerance. (*ib*)

### ***Response to Arguments***

Applicant's arguments filed with the present amendment have been considered but are moot in view of the new ground(s) of rejection.

### ***Allowable Subject Matter***

Claims 9 and 25-30 are allowed.

Claim 9 is allowed for the reasons set forth in the prior Office action. The examiner notes that claim 9 has been rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and now includes all of the limitations of prior base claim 6.

New claims 25-30 are allowed as being dependent upon allowed base claim 9.

Claim 24 is maintained allowable for the reasons set forth in the prior Office action if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

### *Conclusion*

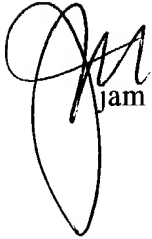
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian Mercado whose telephone number is (571) 272-1289. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Art Unit: 1745

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



jam



Patrick Ryan  
Supervisory Patent Examiner  
Technology Center 1700